effect sensors **15212** and **15213** for the plunger-position, a hall-effect sensor **15214** for an inlet valve, and a hall-effect rotary position sensor **15208**.

[0714] Various alternatives and modifications can be devised by those skilled in the art without departing from the disclosure. Accordingly, the present disclosure is intended to embrace all such alternatives, modifications and variances. Additionally, while several embodiments of the present disclosure have been shown in the drawings and/or discussed herein, it is not intended that the disclosure be limited thereto, as it is intended that the disclosure be as broad in scope as the art will allow and that the specification be read likewise. Therefore, the above description should not be construed as limiting, but merely as exemplifications of particular embodiments. And, those skilled in the art will envision other modifications within the scope and spirit of the claims appended hereto. Other elements, steps, methods and techniques that are insubstantially different from those described above and/or in the appended claims are also intended to be within the scope of the disclosure.

[0715] The embodiments shown in drawings are presented only to demonstrate certain examples of the disclosure. And, the drawings described are only illustrative and are non-limiting. In the drawings, for illustrative purposes, the size of some of the elements may be exaggerated and not drawn to a particular scale. Additionally, elements shown within the drawings that have the same numbers may be identical elements or may be similar elements, depending on the context.

[0716] Where the term "comprising" is used in the present description and claims, it does not exclude other elements or steps. Where an indefinite or definite article is used when referring to a singular noun, e.g. "a" "an" or "the", this includes a plural of that noun unless something otherwise is specifically stated. Hence, the term "comprising" should not be interpreted as being restricted to the items listed thereafter; it does not exclude other elements or steps, and so the scope of the expression "a device comprising items A and B" should not be limited to devices consisting only of components A and B. This expression signifies that, with respect to the present invention, the only relevant components of the device are A and B.

[0717] Furthermore, the terms "first", "second", "third" and the like, whether used in the description or in the claims, are provided for distinguishing between similar elements and not necessarily for describing a sequential or chronological order. It is to be understood that the terms so used are interchangeable under appropriate circumstances (unless clearly disclosed otherwise) and that the embodiments of the invention described herein are capable of operation in other sequences and/or arrangements than are described or illustrated herein.

What is claimed is:

1. A system for electronic patient care, the system comprising:

a monitoring server comprising middleware configured to communicate with a plurality of databases, wherein at least one of the plurality of databases includes a data formatting or a communications protocol different from another database of the plurality of databases;

a monitoring client configured to communicate with the plurality of databases via the monitoring server, wherein the monitoring server translates communication between the monitoring client and the plurality of databases utilizing the middleware;

a first medical pump coupled to the monitoring client; and

a second medical pump coupled to the first medical pump.

2. The system according to claim **1**, wherein the monitoring server is adapted to format data from the plurality of databases to download the formatted data into the monitoring client.

3. The system according to claim **1**, wherein the monitoring server is configured to interrogate an electronic health records database to receive patient information therefrom using the middleware.

4. The system according to claim **3**, wherein the monitoring server is further configured to populate the monitoring client with a predefined set of information in accordance with patient information.

5. The system according to claim **1**, wherein the middleware is configured to mediate communication between the monitoring client and intra-facility databases or extra-facility databases.

6. The system according to claim **1**, wherein the middleware is configured to provide an application programming interface for communicating with the plurality of databases.

7. The system according to claim **6**, wherein at least two of the plurality of databases has disparate organization protocols, wherein the application programming interface provides a common interface to the disparate organization protocols.

8. The system according to claim **6**, wherein at least two of the plurality of databases has disparate formatting protocols, wherein the application programming interface provides a common interface to the disparate formatting protocols.

9. The system according to claim **6**, wherein at least two of the plurality of databases has disparate communication protocols, wherein the application programming interface provides a common interface to the disparate communication protocols.

10. The system according to claim **1**, wherein the middleware is configured to provide ephemeral storage of at least one of orders, medications, progress notes, monitoring data, treatment data, patient-treatment parameters, patient-monitoring parameters, and operating parameters received from the monitoring client for uploading into an electronic health records database of the plurality of databases.

11. The system according claim **1**, wherein the monitoring server is configured to update the monitoring client.

12. The system according to claim **1**, wherein the monitoring server is configured to update the first medical pump.

13. The system according to claim **1**, wherein the middleware is configured to provide an application programming interface for communicating with the plurality of databases, wherein the application programming interface includes a secure data class.

14. The system according to claim **1**, wherein the monitoring client includes a sandbox component configured to control access to the at least one of a hardware resource and a software resource.

15. The system according to claim **1**, further comprising a bus, wherein:

the first medical pump in operative communication with the bus; and

the second medical pump in operative communication with the bus.